

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data **1FK7103-2AC71-1EB0-Z**
X53

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data			
Rated speed (100 K)	2000 rpm	Motor type	Permanent-magnet synchronous motor		
Number of poles	8	Motor type	Compact		
Rated torque (100 K)	25.0 Nm	Shaft height	100		
Rated current	11.0 A	Cooling	Natural cooling		
Static torque (60 K)	30.00 Nm	Radial runout tolerance	0.050 mm		
Static torque (100 K)	36.00 Nm	Concentricity tolerance	0.10 mm		
Stall current (60 K)	11.60 A	Axial runout tolerance	0.10 mm		
Stall current (100 K)	14.40 A	Vibration severity grade	Grade A		
Moment of inertia	112.000 kgcm ²	Connector size	1.5		
Efficiency	93.0 %	Degree of protection	IP64		
<th colspan="2">Physical constants</th>		Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Torque constant	2.45 Nm/A	Temperature monitoring	KTY84 temperature sensor in the stator winding
		Voltage constant at 20° C	162.0 V/1000*min ⁻¹	Electrical connectors	Connectors for signals and power rotatable
		Winding resistance at 20° C	0.29 Ω	Color of the housing	Light gray RAL 7035
		Rotating field inductance	7.9 mH	Holding brake	with holding brake
		Electrical time constant	27.50 ms	Shaft end	Feather key
		Mechanical time constant	1.43 ms	Encoder system	Encoder AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
		Thermal time constant	65 min		
		Shaft torsional stiffness	108000 Nm/rad		
		Net weight of the motor	33.0 kg		



Figure similar

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Optimum operating point

Optimum speed	2000 rpm
Optimum power	5.2 kW

Limiting data

Max. permissible speed (mech.)	5000 rpm
Max. permissible speed (inverter)	3550 rpm
Maximum torque	108.0 Nm
Maximum current	46.5 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	43.0 Nm
Power supply voltage	DC 24 V \pm 10 %
Coil current	1.0 A
Opening time	300 ms
Closing time	70 ms
Highest braking work	3380 J

Recommended Motor Module

Rated inverter current	18 A
Maximum inverter current	54 A
Maximum torque	108.00 Nm

Special design

X53 Paint finish: Light gray RAL 7035